EXHIBIT 4

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Subject: European Patent Application No. 06741539.8 - 1564
Applicant: Koninklijke Philips N.V.

This is in reply to the communication pursuant to R. 70a(2) EPC issued on 5 December 2013 for European Patent Application No. 06 741 539.8.

Cited documents
The documents referred to as D1-D9 in the communication are also referred to as D1-D9, respectively, in the following.

Novelty
Claim 1 is novel with respect to each of D1, D2 and D3, e.g. in that the housing element, which includes a transparent region enabling transmission of light emitted by the one or more light-emitting elements therethrough, includes fastening means for detachably coupling the housing element to the heat dissipation element.

D1 relates to a lighting device and a system for illuminating the interior of a vehicle, air craft or building. A heat transfer device is attached to the bottom of the circuit board and is further attached to the bottom of a channel case. A plurality of LEDs are mounted on a circuit board and generate light through a lens (abstract). D1 does not disclose a housing element which includes fastening means for detachably coupling the housing element to a heat dissipation element. Instead, there is provided a lens (308) which engages the channel case (306) or the channel lip (504), but which does not include any fastening means ([25], Figs. 5-6).

D2 relates to an electrically driven LED lamp assembly (abstract). D2 does not

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disclose a housing element which includes fastening means for detachably coupling the housing element to a heat dissipation element. Instead, there is provided a transparent cover (46) which is fastened by a seal (48) (col. 5, l. 26-31). It should be noted that even in the case the cover in Fig. 3 would be interpreted by the Examiner as the housing element of the present invention, it is obvious from Fig. 3 that the cover itself includes no fastening means for detachably coupling the cover to a heat dissipation element.

D3 relates to a LED tubular lighting device and control device. A circuit board with LEDs is secured in a trough and disposed in a transparent tube (11) (abstract). D3 does not disclose a housing element which includes fastening means for detachably coupling the housing element to a heat dissipation element. Instead, it is merely mentioned that the trough (13) is provided with fins (133) that follow the curvature of the inner surface of the transparent tube (11), and there is not further disclosure of any connection between the trough and the transparent tube.

Accordingly, independent claim 1 is novel over any one of D1, D2 and D3 and the requirements of Art. 52 and 54 EPC are fulfilled.

Closest prior art

D1 relates to a lighting device wherein a heat transfer device is attached to the bottom of the circuit board and is further attached to the bottom of a channel case. A plurality of LEDs are mounted on a circuit board and generate light through a lens (abstract). D1 is therefore considered to represent the closest prior art.

Inventive step

The present invention as defined by independent claim 1 differs from the closest prior art, e.g., in that the housing element includes fastening means for detachably coupling the housing element to the heat dissipation element.

The technical effect resulting from this technical feature is that the present invention provides a secure and convenient connection between the housing element and the heat dissipation element.

Thus, in view of the closest prior art, the objective technical problem solved by the present invention is how to provide a secure and convenient connection between the housing element and the heat dissipation element.

The present invention solves this problem by means of the light-emitting module as defined in claim 1. The light-emitting module comprises a thermally conductive substrate having one or more light-emitting elements thermally connected thereto, the substrate configured to operatively couple a source of power to the one or more light-emitting elements, thereby providing a means for activation of the one or more light-emitting elements. The light-emitting module further comprises a heat

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dissipation element thermally coupled to the thermally conductive substrate. Furthermore, the light-emitting module comprises a housing element including fastening means for detachably coupling the housing element to the heat dissipation element, the substrate being enclosed between the heat dissipation element and the housing element, the housing element including a transparent region enabling transmission of light emitted by the one or more light-emitting elements therethrough. As the housing element includes fastening means for detachably coupling the housing element to the heat dissipation element, there is provided a secure connection between the housing element and the heat dissipation element. The connection is also convenient, e.g. due to the fact that the fastening means are included in the housing element, and there is no need of auxiliary fastening means.

D1

D1 discloses a lighting device comprising a plurality of LEDs mounted on a circuit board, wherein the LEDs generate light through a lens (abstract). A channel case 306 is formed with a bottom and two opposing sides, the channel case 306 being an elongated box forming an interior space. The channel case 306 can also include integral mounting grooves for the lens 308. The lens 308 engages the opposed sides of the channel case 306 or the lens 308 can engage the channel case lip 504 of the opposed sides of the channel case 306 ([25], Fig. 5). However, D1 does not teach, nor suggest, a housing element which includes fastening means for detachably coupling the housing element to a heat dissipation element. Instead, the lens merely engages the channel case 306 or the channel lip 504, and does not include any fastening means. It will be appreciated that the arrangement of D1 by engaging the lens into the channel case or lip is completely different from the much more convenient, robust and secure arrangement of the present invention. The arrangement in D1 results in an unstable and insecure fastening between the lens 308 and the channel case 308 or the channel lip 504. In contrast, the fastening means of the housing element in the present invention secure a releasable connection between the housing element and the heat dissipation element ([14], [29], [48], [50-51]). Consequently, the present invention as defined by claim 1 results in a convenient, robust and secure connection between the housing element and the heat dissipation element.

With the closest prior art alone, in an attempt of solving the above-stated objective technical problem, the skilled person would not find any guidance on how to solve the objective technical problem. At most, the skilled person could try to redesign the channel case 308 or the channel lip 504 for the engagement of the lens 306. However, he would not be inclined to include or incorporate any fastening means to the lens. It should also be noted that the skilled person would not attempt to include or incorporate any fastening means to the lens when considering the fact that the lens primarily serves the purpose of light transmission, and not the purpose of any attachment of the lens.

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Hence, a person skilled in the art faced with the objective technical problem would not find a solution falling within the terms of the present invention in D1 alone. Thus, claim 1 is clearly inventive over the closest prior art.

D1+D2

Furthermore, the skilled person faced with the objective technical problem above starting from the closest prior art and turning to D2 would not arrive at the invention as defined in independent claim 1. There is nothing in D2 that would contribute to the arrangement of D1, thereby providing an arrangement pointing towards the solution proposed in the present application (or vice versa). More specifically, as the cover as shown in Fig. 2 or Fig. 3 in D2 does not comprises any fastening means for a detachable coupling of a housing element to a heat dissipation element, there is no guidance for the skilled person towards the present invention. The Examiner states that the cover in Fig. 3 in D2 is coupled to the heat sink by the flange at the edge and a holder. However, it will be appreciated that the holder is not a part of the cover, leading to an inconvenient arrangement. In contrast, the integrated fastening means of the housing element in the present invention provides a convenient coupling arrangement. Furthermore, the holder of D2 does not provide a secure, releasable coupling of the cover to the heat sink. Furthermore, as the lens of D1 serves the purpose of light transmission, the skilled person would be lead away from the idea of including any fastening elements to the lens.

Hence, any attempt of combining the holder of D2 with the arrangement of D1 does not solve the objective technical problem, and does not lead to the invention as defined in independent claim 1.

In view of the above, the present invention as defined in new claim 1 is clearly inventive over the closest prior art and D2.

D1+D3

The skilled person faced with the objective technical problem above starting from the closest prior art and turning to D3 would not arrive at the invention as defined in independent claim 1. It will be appreciated that D3 does not disclose any details of a connection between the trough and the transparent tube. Hence, the skilled person would not be lead to provide a housing element which includes fastening means for detachably coupling the housing element to a heat dissipation element by a combination of D1 and D3.

In view of the above, the present invention as defined in new claim 1 is clearly inventive also over the closest prior art and D3.

D1+(D4 to D9)

The Examiner remarks that the housing element or cover could be attached to the heat dissipation element by other alternatives than those disclosed in D1 or D2. However, it will be appreciated that none of the cited prior art documents D4-D9

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discloses a housing element, which includes a transparent region enabling transmission of light emitted by the one or more light-emitting elements therethrough, includes fastening means for detachably coupling the housing element to a heat dissipation element. Notably, of the cited documents D4-D8, there is even no mentioning of any heat sink or heat dissipation element, and the skilled person would not be inclined to even turn to one of these documents given the objective technical problem to solve. Even in the remote case the skilled person would turn to one of these documents, it should be noted that the cited documents disclose various attachment devices which would lead to (additional) devices applied to the arrangement of D1 to try to solve the problem of providing a secure and convenient connection between the housing element and the heat dissipation element. Hence, any such additional attachment devices would not solve the objective technical problem. In contrast, the integrated fastening means of the housing element in the present invention provides a convenient coupling arrangement. Furthermore, the arrangements of D4-D9 do not provide any secure, releasable coupling of a housing element to a heat dissipation element. It will also be appreciated that the lens of D1 serves the purpose of light transmission, and the skilled person would be lead away from the idea of including any fastening elements to the lens.

Hence, starting from D1 and turning to the disclosures of D4-D9, he would not be lead to the idea of providing a housing element, which includes a transparent region enabling transmission of light emitted by the one or more light-emitting elements therethrough, with integrated fastening means for detachably coupling a housing element to a heat dissipation element.

Accordingly, the present invention as defined by the claims meets the requirements of inventive step pursuant to Art. 52 and 56 EPC.

Unity

Based on the above, the objection of the Examiner that claim 1 is not novel over D1, D2 or D3 is overcome. Furthermore, claim 1 is also inventive with respect to the cited prior art. It should be noted that no objection on account of lack of unity a priori is justified in respect of a dependent claim and the claim on which it depends, on the ground that the general concept they have in common is the subject-matter of the independent claim, which is also contained in the dependent claim (GL F-V 8). Hence, as all dependent claims refer to claim 1, the claim set fulfils A. 82 & R. 44 of unity of invention.

Consequently, it is therefore submitted that the claim set is novel (Art. 54), inventive (Art. 56) and fulfils the requirements of unity (Art. 82) .

Request of grant

As the objections put forth in the communication now have been overcome, it is requested that the present patent application proceeds to a grant. Should you find

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that the present application is still not in order for proceeding to a grant, yet another opportunity to file observations under Art. 94(3) EPC or a telephone interview is requested. If neither a further communication under Art. 94(3) EPC, nor a telephone interview, is considered to be appropriate, oral proceedings under Art. 116(1) EPC are hereby requested.

The Professional Representative,

L. Stil